**Software Requirements and Design Document**

**For**

**Group 2**

Version 1.0

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**1.**  **Overview (5 points)**

Once logged in, users will have access to multiple views containing information relevant to that view. For example, users will be able to navigate to the diet view and see information related to their calorie intake, and micro/macronutrients for the day. Similarly, they will be able to log workouts and track calorie expenditure for the day. We plan to pull health and diet data from an existing database to improve the ease of use for users allowing them to simply enter a workout or type of food they ate, and the information pertaining to that will be automatically stored in the relevant section. For example, a user may say they ate a yogurt and the calories and nutrient information will be calculated for them rather than requiring manual entry.

**2.**  **Functional Requirements (10 points)**

1. The user will be prompted for their biometric or username and password login in order to enter the app. This will ensure that the users goals and specifications will be loaded each time and that their health information will be secured.
2. Upon first login the user will enter a page where they will enter their height, weight, and gender. Additionally, they will be asked to select one of three goals, lose weight, maintain, or gain muscle.
3. The user should be able to go into their settings and modify these goals at any time, which should update their caloric requirements, and their recommended workouts.
4. A user should be able to search and add food to their tracker and then have this update their calorie intake, macros, and micros consumed.
5. A user should be able to select a workout from the list of all workouts via search, or from the list of the recommended workouts.
6. Upon selecting a workout it should display the activity.
7. A user should be able to select a workout, and upon completing it, it should update their calories expended.
8. The user should be able to update their weight at any time and calorie intake should be adjusted.
9. Upon entering a progress page the user should be able to view their weight, lift, and cardio stats.
10. The user should be able to change their allocated macros from the recommended in the settings page.

**3.**  **Non-functional Requirements (10 points)**

1. The system should store user information after logout.
2. A user should only have the ability to access their account through the login page.
3. A system should log the user out after 5 minutes of inactivity.
4. A system should only allow 5 login attempts within a 5 minute duration.
5. The system should be available for multiple users at the same time.
6. The system should not be limited in the amount of storage a user needs.
7. The system should return searched data within 2 seconds.
8. The system should update caloric expenditure and macros within 5 seconds of entering new weight or goal.
9. The system should load into the home page with 5 seconds of logging in.
10. A users data should only be shown publicly if they wish their information to be shown through settings.

**4.**  **Use Case Diagram (10 points)**

*Diagram

Description automatically generated*

**5.**  **Class Diagram and/or Sequence Diagrams (15 points)**

*Timeline

Description automatically generated*

**6.**  **Operating Environment (5 points)**

The software will operate on iPhones running iOS. We plan to use data from the iPhone’s FaceID unlocking system for user verification upon login if a user has an established account and selects to use FaceID for login purposes. The application will not pull data from other applications, however will use data from a database with health related information to create accurate predictions for users to keep track of their health and fitness goals

**7.**  **Assumptions and Dependencies (5 points)**

Our system will be utilizing firebase for storing user data and tracking existing users. XCode is required for development in swift which hinders development from windows machines. We plan to pull health data from a health data API that we will use to construct normal ranges for various health factors such as calorie ranges and exercise plans. We do not intend to reuse components from another project. Anyone of these could have unforeseen challenges that may affect our ability to implement features related to them.